BULLETIN
OF THE
BROOKLYN ENTOMOLOGICAL SOCIETY

VOL. VIII FEBRUARY, 1913 NO. 3

A New North American Butterfly in the Family Lycaenidae.

By WILLIAM PHILLIPS COMSTOCK.

Strymon titus, Fabr.

Var. *immaculosus*, nov.

♂ and ♀. This variety is slightly smaller in size than the normal form of *S. titus* Fabr. (expanse of ♂ from 28-30 mm., ♀ from 30-34 mm. as compared with ♂ 30-35 mm., ♀ 33-38 mm. in normal specimens*).

The head, thorax, abdomen and appendages do not differ from the normal form.

The upper surface may be as in the normal form of ♂ and ♀, a satiny seal brown with slight greenish reflections (Figs. C and D), or in a series of specimens, the surface may become gradually suffused with fulvous, until an extreme form is reached in which the outer half of the disk of the primaries in both ♂ and ♀ is completely covered with fulvous scales and there appears a complete row of marginal red-orange or fulvous spots on both primaries and secondaries in ♂ and ♀, although on the primaries these spots become lost in the ground color in extreme specimens such as are shown on the plate, Figs. A and B.

On the underside the ground color varies, some specimens being like the normal form, and others of a paler shade. All black markings are obsolete to absent (Figs. E, F, G and H), showing as mere pin points even where best defined. In these specimens a trace of the white markings occurs as a few scattered scales about the black markings. The red marginal spots of the secondaries are retained for the most part in reduced size, but in those specimens where the row of red spots is repeated the full marginal length of the primaries, the secondary row is of fully normal size and appears more prominently because of the obsolescence of other markings on all four wings.

*Measurement made from tip of wing to center of thorax and doubled.

I did not examine the genitalia and androconia. The name given is the Latin adjective meaning unspotted or unspeckled.

Described from nine ♂ and twelve ♀ cotypes.

12 from Provo, Utah, variously dated in July, collected by Tom Spalding.

8 from Utah (general label), no date.

1 from Miniota, Manitoba, in July.

Means were selected as types, 1 ♂ and 1 ♀; the remaining specimens are considered as paratypes. The types are retained in my own collection. One pair of paratypes each are to be deposited with the National Museum in Washington, American Museum of Natural History in New York, Dr. Henry Skinner in Philadelphia, and Dr. William Barnes in Decatur, Ill.

I have checked all literature relating to *S. titus* as recorded in the bibliography below, and I can find no reference to any such variation as here described. Elrod in his "Butterflies of Montana" finds that specimens in Montana occur "with or without an outer marginal row of orange spots or a distinct orange band" on the upper side,

French in "The Butterflies of the Eastern United States" also refers to orange spots on the upper surface of the hind wings in some specimens. It is quite usual to find specimens with red-orange spots repeated upon the termen of the primaries beneath; also in females there are often one or more spots of red-orange near the anal angle of the secondaries above and sometimes a fulvous suffusion above at the anal angle of the primaries.

For the most part, eastern specimens from the southern part of Canada, New England, the Middle States and the Southwestern States have well defined discal bands of black spots on the under side of both wings, which are more or less edged with white. I have two male specimens from the Catskills, taken at an altitude of from 1,500 to 2,000 feet, aberrant in that the discal rows of black spots are very poorly defined and there are practically no white markings on the under side. The black spots, however, cover about the normal area and are indistinct because of suffusion and appear to be blurred. They are not like the spots in variety *immaculosus* which are, where present, reduced to fine points.

By far the most complete description of *S. titus* is to be found in "The Butterflies of the Eastern United States" by S. H. Scudder. However, he makes no reference to such a variation as I have described, but calls attention to the fact that "male specimens from Idaho and Minnesota differ from all others that I have seen in having the spots of the inner row of both wings much larger, being nearly half as large as the marginal spots of the hind wings."

Mr. Scudder also gives us information concerning the distribution, and his faunal map shows the species extending from northern New England to central Georgia on the Atlantic coast, and then in a broad belt westward along the line of the Lakes on the north and through central Texas to Arizona on the south. It also extends westward to the coast through the states of Montana and Washington. Mr. Scudder's map excludes southern Texas and the larger part of Utah from which I have specimens, and shows but one Canadian locality, in the Province of Ontario, though specimens are now recorded from Manitoba.

So far as I know *S. titus* is not recorded from California, but the type locality of the synomym *mopsus* is given as Georgia and Florida, although I know of no actual Florida records.

I record one other specimen, a male from Texas, which is interesting because the marginal row of spots on the secondaries beneath are pale buff and the specimen is of large size, being about 37 mm. in expanse. Otherwise it is typical. More material might prove this to be a member of a local race, presumably a desert form.

Bibliography of *S. titus*.

Fabr., Ent. Syst. III, 297, 1793.
Godt., Enc. Meth. IX, 688, 1823.
Dbl.–Hew., Gen. Diur. Lep., 494, 1852.
Kirby, Cat. Diur. Lep., 399, 1871.
Scudder, 4th An'l Rep. Trustees Peabody Aca. Sci., 53, 1871.
Scudder, Buff. Bull. III, 105, 1876.
Strecker, Cat. N. A. Macrol., 90, No. 109, 1878.
Edwards, Cat. N. A. Butt. 57, No. 376, 1884.
Fernald, Butt. Me., 84, 1884.
French, Butt. E. U. S., 278, 1885.
Maynard, Butt. 38, pl. 4, figs. 48, 48a, 1886.
Scudder, Butt. E. U. S. II, 809, pl. 6, figs. 24, 26, 1889.
Maynard, Manual of N. A. Butt., 146, 1891.

Blatchley, 17th Rep. State Geologist Indiana, 394, .No. 64, 1892.
Beutenmüller, Des. Cat. Butt., 281, pl. 5, fig. 8, 1893.
Skinner, N. A. Rhop., 50, No. 307, 1898.
Holland, Butt. Book, 250, pl. V, fig. 37, pl. XXX, figs. 10, 14, 1898.
Scudder, Guide to Butterflies 113, pl. XI, fig. 1, 1899.
Hamham, Can. Ent. XXXII, 365, 1900.
Smith, Insects of N. J., 375, 1899; 415, 1909.
Beutenmüller, Butt. Vic. N. Y. C., 34, 1902.
Watson, Jour. N. Y. Ent. Soc., X, 254, 1902.
Dyar, Bull. No. 52, 40, No. 384, 1902
Elrod, Butt. Mont., 131, 1906.

S. titus, syn. mopsus.

Hübner, Zutr. Ex. Schmett, 1, 24, figs. 135, 136, 1818.
Bdl.–LeC. Lep. Am. Sept., 109, pl. 34, 1833.
Morris, Syn. Lep. N. A., 102, 1862.
Harris, Ins. Inj. Veg. Flint's Ed., 278, 1862.
Packard, Guide, 266, 1874.
Mead, Wheelers Rep. V, 779, 1875.

Explanation of Plate II.

A, *S. titus* Fabr. var. *immaculosus* nov. ♂ Utah.
B, " " " " " " ♀ "
C, " " " " " " ♂ Provo, Utah, VII, 19, '08.
D, " " " " " " ♀ " " VII, 9, '09.
E, " " " " " " ♂ Miniota, Man. VII, 7, '01.
F, " " " " " " ♀ Utah.
G, " " " " " " ♂ Provo, Utah, VII, 9, '09.
H, " " " " " " ♀ Provo, Utah, VII, 23, '08.
I " " " ♂ Van Cortland Park, New York, VII, 10, '01.
K, " " " ♀ Jamesburg, N. J., VI, 25, '09.

Long Island Lepidoptera Records.—Among the rarer species recently exhibited before the Society by Mr. Engelhardt from Central and Eastern Long Island, were *Eubaphe læta*, *Scopelosoma moffettiana*, *Schinia trifascia* (on boneset), *Aglaia viatica*, *Catocala residua* (Brooklyn), *Catocala lacrymosa*, *Rhynchagrotis anchocelоides* var. *brunneipennis*, *Semiophora eliminata*, *Agrotis violaris*, *Anytus capax*, *Morrisonia vomeriana*, *Cucullia speyeria*, *Derrima stellata*, and *Lapara bombycoides*. The last named came from Promised Land, and tended toward being intermediate with typical specimens of *coniferarum*.

Lepidoptera.—*Sesia sigmoidea* is recorded from Long Island, bred from dwarf willow. *Sesia rhododendri* Beutenmüller, was bred from the rhododendrons of Prospect Park, a new record for New York State.